

2.1 INTRODUCTORY REMARKS

On July 27–29, 2005, a 3-day workshop was held in Washington, D.C., to peer-review 88 indicators proposed by the U.S. Environmental Protection Agency (EPA) for its 2007 Report on the Environment Technical Document. The workshop was attended by 21 peer reviewers (**Appendix 2A**) and a number of observers (**Appendix 2D**), including EPA scientists and interested stakeholders.

The workshop was the first of a two-part peer review of these indicators. **Section 1** of this report describes the overall background and purpose of the peer review. **Section 2** summarizes the results of the peer review workshop, which began with opening remarks, summarized here, and proceeded with peer review discussions, summarized in Sections 2.2 through 2.7. **Section 3** summarizes the results of the second part of the peer review, conducted via teleconference in November 2005.

2.1.1 Welcome

Jan Connery (ERG) welcomed the peer reviewers and observers to the Workshop to Peer Review Proposed Indicators for U.S. EPA's 2006 Report on the Environment (ROE). She provided the following background information.

A total of 88 indicators proposed by EPA for the Agency's 2007 Report on the Environment (ROE07) Technical Document were being reviewed at the workshop. The indicators and reviewers were divided into six groups: air, water, land chemical, land waste, human health, and ecological condition. The reviews for land chemical and land waste would be completed by the end of the first day. Reviews in the other four areas would extend for 3 days.

Several weeks before this workshop, reviewers had been provided with a charge (**Appendix 2B**), access to the public comments on the indicators, and the indicator materials. Each indicator comprised three components: the indicator data displayed in graphic or tabular form, narrative text, and metadata (QA/QC) forms. Reviewers were asked to review the indicator materials individually and provide preliminary written responses to the charge questions for each indicator. ERG had compiled these pre-meeting comments by indicator (**Appendix 2C**) and circulated them to the reviewers to read prior to this meeting. These preliminary comments served as preparation and background; Ms. Connery noted that reviewers could change their comments based on the discussions.

Ms. Connery reviewed the discussion agendas (**Appendix 2E**) and noted that time had been set aside each day for public comments. After the introductory remarks, the six reviewer groups would convene in different locations in the room to discuss the indicators. Observers were free to listen to (but not join in) the discussions. Aside from the public comment sessions, there would be no further plenary sessions. Ms. Connery then asked the reviewers to introduce themselves.

After Ms. Connery's remarks, Peter Preuss, Director of the National Center for Environmental Assessment (NCEA) in EPA's Office of Research and Development, welcomed the peer reviewers and observers, and provided them with context on the ROE.

Dr. Preuss credited former EPA Administrator Christie Todd Whitman as the impetus for the ROE project. Based on her initiative, ORD took the lead in developing the scientific foundation for the ROE. ORD worked with EPA's Office of Environmental Information to publish the results and make them accessible to the public. ORD's approach to the Technical Document was to ask a series of questions, look for indicators to answer them, and highlight areas where indicators were not yet available. The first draft ROE was published in 2003 (ROE03) and peer-reviewed by EPA's Science Advisory Board.

2.1.2 Background on EPA's Report on the Environment

Dr. Denise Shaw (NCEA) presented background on the development of ROE07. The vision for the ROE is that it serves as a way for EPA to:

- Report periodically to the public on trends in the environment and human health that are relevant to the Agency's mission.
- Provide input into EPA's strategic planning process.

EPA has accomplished this vision by identifying a set of questions about the state of the environment and human health and then identifying and reporting on indicators that help answer those questions. ROE07 has evolved from ROE03. EPA published ROE03 as a draft report and asked for feedback. The Agency received comments from the Science Advisory Board, the National Advisory Council for Environmental Policy and Technology, and a variety of stakeholders at a series of national dialogue meetings and via the public docket.

ROE07 differs from ROE03 in several ways:

- The questions used in ROE03 were revised for ROE07.
- The ROE03 indicator definition and the criteria against which the indicators are evaluated were also refined for ROE07.
- Some indicators from ROE03 were carried forward to ROE07 as separate indicators, some were combined to form a single indicator, and some were withdrawn.
- EPA also proposed several new indicators that were not included in ROE03.
- The ecological condition chapter of the document has been reorganized, with many of the indicators that were originally presented in this chapter in ROE03 now being presented in the air, water, or land chapters of ROE07.
- Several indicators are being presented in more than one chapter.
- In ROE07, EPA is taking the first steps toward scaled indicators. ROE07 will include regional subsets of national indicators, as well as a few regional indicators.

Next steps in the development of ROE07 will include revising the indicators in response to comments from this peer review, drafting text for the five ROE chapters that will present and discuss the indicators, and organizing a peer review of the entire report in 2006. EPA expects to release ROE07 in late 2006 or early 2007.

Dr. Shaw then clarified a few indicator issues, including the relationship between the ROE and EPA's Annual Reports, how indicators will be presented in the report, how EPA decided which ROE03 indicators to recommend withdrawing, how indicators were screened against the indicator definition and criteria, and the acknowledgement that indicators alone often do not fully answer the ROE questions but make an important contribution to the answer.

Ms. Connery facilitated a brief question-and-answer period during which Dr. Shaw and Dr. Preuss clarified that:

- EPA made a policy decision to keep ROE03 in draft form. ROE03 was intentionally not finalized, but was used as a reference for this report. ROE03 was a step in evolving the Report on the Environment.
- ROE07 is similar to the Heinz Report in that the two reports have many indicators in common. However, the reports have different intents. The Heinz Report has a narrower focus and different approach. It focuses on ecological system conditions only, asks different questions, and has a different stakeholder base.
- ROE07 and EPA's Coastal Conditions Report are not redundant; the ROE utilizes some of the content from the Coastal Conditions Report and applies the information to answer the ROE questions.
- ROE07 will include material (to be developed) that clarifies the overall intent of ROE07 (i.e., general trends over time versus quantitative data).
- The ROE07 framework uses an ecological top-down approach. EPA looked at a variety of frameworks and indicators as it developed its framework, however, none was wholly satisfactory as a model.
- EPA hopes, through the questions that form the basis for ROE07, to encompass a multimedia approach. The human health and ecological condition chapters were reworked in ROE07 based on reviewer recommendations. Outcomes are now discussed in all five chapters (air, water, land, human health, and ecological condition).
- ROE07 discusses effects even if (as is usually the case) they cannot be directly linked to pressures, ambient conditions, or exposures.
- Information on the target population is captured in the metadata.
- Indicators withdrawn from ROE03 (i.e., not proposed for ROE07) went through a rigorous review and decision process. Reviewers have been provided with the list of withdrawn indicators, as well as EPA's rationale for withdrawing them, and are free to propose that EPA include them in ROE07.
- Issues relating to specific indicators versus broad indicators (e.g., cancer mortality) and specific sites versus all sites will be discussed by reviewers. EPA may aggregate indicators, either up or down (e.g., individual vs. all air pollutants), depending on reviewer recommendations.
- The proposed indicators do not currently include indicators based on freshwater Environmental Monitoring and Assessment Program (EMAP) measurements because those data are not yet available. EPA may develop indicators based on these data and have them reviewed later in 2005.

2.1.3 Reviewer Discussions

After the question-and-answer period, Ms. Connery opened the floor for public comment; there were no commenters. Reviewers then convened in their separate groups and began their discussions, which are summarized in Sections 2.2 through 2.7 of this report.

2.1.4 Public Comment

Stakeholders had an opportunity to make oral comments each day of the meeting. There was one such comment, made by the Battery Council International on the morning of the third and final day of the meeting. It pertained to two of the air indicators, so is included in Section 2.2 (air) of this report.